

Amendments to the Specification:

Please replace the paragraph at P17, L1-3 with the following amended paragraphs:

In a further important aspect, the α -MSH equivalent is a polypeptide having at least 3 amino acids including the following sequence Lys-Pro-Val, such as Gly-Lys-Pro-Val (amino acids 10-13 of SEQ ID NO:1), or the following sequence His-Phe-Arg, and being able to act on an α -MSH receptor.

At page 16, end of page, please insert the following new paragraphs:

The sequence of α -MSH is the following: N-acetyl-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH₂ (SEQ ID NO:1).

WO96/41815 and USP 5,830,994 teach "a peptide sequence comprising at least one sequence of 4 amino acids obtained from alpha-MSH", or an analog in which one or more of the native L-amino acids is replaced by the corresponding D-amino acids or by a racemic mixture (DL-form). In the case of the Phe, this may be replaced by homo Phe, or a halogenated derivative, such as p-fluoro Phe, in D-, L-, or DL- form. Preferred peptides are [Lip]X-His-Phe-Arg-Y, where Lip is thioctic acid or one of its derivatives, X is Glu, -OH or -NH₂, and Y is Trp-Gly-OH, Trp-Gly-NH₂, Trp-NH₂ or Trp-OH, thus corresponding to derivatives of the fragments AAs 6-9, 6-10, 5-9 or 5-10 of SEQ ID NO:1. The most preferred peptides contained D-amino acids and were

<u>I(DL) Lip]Glu-His-D.homoPhe-Arg-Trp-Gly-NH2</u>	<u>I</u>
<u>I(DH Lip]Glu-His-D.homoPhe-Arg-Trp-Gly-NH2</u>	<u>II</u>
<u>I(DL) Lip]Glu-His-paraFluoroPhe-Arg-Trp-Gly-NH2</u>	<u>III</u>
<u>I(DL) Lip]His-D.homoPhe-Arg-Trp-NH2</u>	<u>IV</u>
<u>[N.Lipooyl-Lysine]Glu-His-D.homoPhe-Arg-Trp-Gly-NH2</u>	<u>V</u>
<u>[N.lipooyl-Lysine]His-D.homoPhe-Arg-Trp-Gly-NH2</u>	<u>VI</u>
<u>[N.lipooyl-Lysine]His-D.homoPhe-Arg-Trp-NH2</u>	<u>VII</u>

which are all derivatives, or mutants, of the aforementioned fragments of SEQ ID NO:1.

WO88/00833 (corresponds to USP 5,028,592) teaches (page 4) peptides which comprises the amino acid sequence Lys-Pro-Val (AA 11-13 of alpha MSH, SEQ ID NO:1). The peptides are 3-13 a.a. long, have sequences "corresponding" to that of alpha-MSH, and include the aforementioned Lys-Pro-Val. The peptide may be acylated at the amino terminus and/or amidated at the carboxyl terminus. The preferred peptide is the tripeptide.

Hadley, USP 5,731,408 teaches the D-amino acid containing peptides

Ac-Nle-Asp-His-D-p-iodo-Phe-Arg-Trp-Lys-NH₂, and
Ac-Nle-Asp-His-D-2'Nal-Arg-Trp-Lys-NH₂,
both cyclized between AAs Asp-2 and Lys-7.

WO99/21571 constructed a library of approximately 69 million tetrapeptides and screened them for MC receptor binding activity. The consensus sequence was A1-B2-C3-D4, where A1 is αFmLys or His, B2 is Arg, D-Thi or PCl-f, C3 is Arg, L-Cha or D-Ile, and D4 is D-Nal or D-Arg. The abbreviation pCl-f denotes D-4-chloroPhe; Nal is naptithalene, Thi is (2-thienyl) alanine, Cha is cyclohexyl Ala, and αFmLys is α-Fmoc Lys.

WO87/04623 teaches alpha-MSH analogs formula R₁-W-X-Y-Z-R₂ wherein

R₁ is selected from the group consisting of Ac-Gly-, Ac-Met-Glu, Ac-Nle-Glu-, and Ac-Tyr-Glu-;

W is selected from the group consisting of -His- and -D-His-;

X is selected from the group consisting of -Phe-, -D-Phe-, -Tyr-, -D-Tyr-, -(pNO₂)D-Phe⁷;

Y is selected from the group consisting of -Arg- and -D-Arg-;

Z is selected from the group consisting of -Trp- and -D-Trp-; and

R₂ is selected from the group consisting of -NH₂;

USSN - 09/845,717

-Gly-NH₂; and -Gly-Lys-NH₂.

It also teaches additional analogues of MSH set forth on pp.
5-7 of WO87/04623.